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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/401,070	09/22/1999	ARTHUR ANDERSON	3876	4148

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EXAMINER
RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/401,070	ANDERSON ET AL.	
	Examiner	Art Unit	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-79* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-12,14-18,20-24,26,28-31,33-49,51-53,55,56,63-67,68-73 and 75-78* is/are rejected.

7)☒ Claim(s) *6,13,19,25,27,32,50,54,57-62,74 and 79* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 September 1999* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

2. The disclosure is objected to because of the following informalities: on page 15 line 14 and line 19 "command/data 220" should be "command/data 240." On page 20 line 14 "this either of" should be "either of." On page 30 line 8 "able to constantly transmitted" should be "able to constantly transmit." On page 60 lines 1-2 "th the" should be "the." On page 68 line 7 "in it" should be "in its."

Appropriate correction is required.

3. Claim 70 is objected to because of the following informalities: on pg. 91 line 1 "to coupled to" should be "to couple to." Appropriate correction is required.

4. Claim 71 is objected to because of the following informalities: in line 2 "one bi-directional signaling" should be "one bi-directional signaling line." Appropriate correction is required.

5. Claim 27 depends upon claim 25 and as written is a proper dependent claim; however, from its context, the examiner believes that claim 27 was intended to be dependent upon claim 26. The examiner wants to bring this situation to the attention of the applicant in case claim 27 is intended to be dependent upon claim 26 instead of claim 25. Since as it currently stands claim 27 is a proper dependent claim, the examiner will examine claim 27 as being dependent upon claim 25.

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: reference 603 in Fig. 6 (see page 34 line 16-page 35 line 3). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-3, 14-16, 26, 33, 40, 49, 56, 66, 70, 71, 75, and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614).

9. Regarding claim 1, Duncan discloses a telecommunication system comprising: a telephone headset (col. 1 lines 39-44); a headset adapter coupled to the telephone headset and having an accessory interface for transmitting and receiving communication signals (col. 1 line 39-col. 2 line 4 and col. 2 lines 54-59) where a headset system is taken to be a headset along with other accessories and the presence of a bi-directional communication link indicates the use of communication signals; and an accessory for the telephone headset coupled to the accessory interface of the headset adapter, wherein the phone can be directly controlled and monitored by

the accessory via transmission of communication signals between the phone and the accessory through the interface (col. 2 lines 49-65). Duncan possibly does not disclose having an accessory interface bus for transmitting and receiving communications packets or having the accessory be directly controlled and monitored by the adapter. Lincoln discloses a system and method for communication between a central unit and accessories in which accessories are monitored and controlled by a central unit (adapter) through an accessory interface bus which is used for transmitting and receiving communications packets (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to tie all of the accessories together with a central hub and then monitor and control them with communications packets in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible, and robust manner.

10. Regarding claim 2, referring to claim 1, Duncan discloses having at least one bi-directional signaling line for transmitting and receiving communications signals between the accessory and the adapter (col. 2 lines 1-4). Duncan does not disclose transmitting and receiving communications packets over the bus. Lincoln discloses a system and method for communication through an accessory interface bus which is used for transmitting and receiving communications packets (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such

communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to tie all of the accessories together with a central hub and then monitor and control them with communications packets transmitted over a bus in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible, and robust manner.

11. Regarding claim 3, referring to claim 1, Duncan discloses supplying power to the accessory through the interface (col. 1 lines 61-63) and having at least one bi-directional signaling line for transmitting and receiving communications signals between the accessory and the adapter (col. 2 lines 1-4). Duncan does not expressly state how the power is supplied; however, it is well known in the art to supply power by running two wires, a high voltage rail (a V+ line) and a low voltage rail (a ground line), to the accessory, as is evidenced by Lincoln (col. 4 lines 1-14). This is done because supplying power and signals on the same line can be difficult, if not impossible, since the power voltage level can interfere with the signal voltage level. Also, to supply power, two lines are needed in order to supply a voltage differential. It would have been obvious to one of ordinary skill in the art of communications to have a high voltage rail, a low voltage rail, and a signaling line in order to allow power to be delivered through a voltage differential and to keep the power line and signaling line separate. Duncan also does not disclose transmitting and receiving communications packets over the line. Lincoln discloses a system and method for communication through an accessory interface bus which is used for transmitting and receiving communications packets (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such

communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to tie all of the accessories together with a central hub and then monitor and control them with communications packets transmitted over a bus in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible, and robust manner.

12. Regarding claim 14, referring to claim 1, Lincoln discloses having a micro-controller control and monitor the accessory through the transmission and reception of communications packets between the micro-controller and the accessory via the interface bus (col. 4 line 61-col. 5 line 13) where it is obvious that this is done in order to implement Lincoln's protocol using a micro-controller. Micro-controllers are well known in the art of communications as being a cheap, accurate, and reliable way to implement designs. It would have been obvious to one of ordinary skill in the art of communications to have a micro-controller control and monitor the accessory through the transmission and reception of communications packets between the micro-controller and the accessory via the interface bus because micro-controllers are a cheap, accurate, and reliable way to implement designs.

13. Regarding claim 15, Duncan discloses an adapter for a telecommunications headset (col. 1 line 39-col. 2 line 4 and col. 2 lines 49-65). Duncan possibly does not disclose having the adapter comprise: an interface bus; and a micro-controller coupled to the interface bus, for controlling and monitoring at least one accessory to the telecommunications headset which is coupled to the interface bus, wherein the micro-controller controls and monitors the accessory through the bi-directional transmission of communication packets between the micro-controller and the accessory via the interface bus. Lincoln discloses a central unit (adapter) comprising: an

interface bus; and a micro-controller coupled to the interface bus, for controlling and monitoring at least one accessory which is coupled to the interface bus (col. 4 line 61-col. 5 line 13), wherein the micro-controller controls and monitors the accessory through the bi-directional transmission of communication packets between the micro-controller and the accessory via the interface bus (col. 3 lines 25-34 and col. 5 lines 14-25). Micro-controllers are well known in the art of communications as being a cheap, accurate, and reliable way to implement designs. Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to implement the adapter using an interface bus and a micro-controller coupled to the interface bus, for controlling and monitoring at least one accessory to the telecommunications headset which is coupled to the interface bus, wherein the micro-controller controls and monitors the accessory through the bi-directional transmission of communication packets between the micro-controller and the accessory via the interface bus in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible, and robust manner through cheap, accurate, and reliable micro-controllers.

14. Regarding claim 16, referring to claim 15, Duncan discloses supplying power to the accessory through the interface (col. 1 lines 61-63) and having at least one bi-directional signaling line for transmitting and receiving communications signals between the accessory and the adapter (col. 2 lines 1-4). Duncan does not expressly state how the power is supplied; however, it is well known in the art to supply power by running two wires, a high voltage rail (a

V+ line) and a low voltage rail (a ground line), to the accessory, as is evidenced by Lincoln (col. 4 lines 1-14). This is done because supplying power and signals on the same line can be difficult, if not impossible, since the power voltage levels can interfere with the signal voltage levels. Also, to supply power, two lines are needed in order to supply a voltage differential. It would have been obvious to one of ordinary skill in the art of communications to have a high voltage rail, a low voltage rail, and a signaling line in order to allow power to be delivered through a voltage differential and to keep the power line and signaling line separate. Duncan also does not disclose transmitting and receiving communications packets over the line. Lincoln discloses a system and method for communication through an accessory interface bus which is used for transmitting and receiving communications packets (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to tie all of the accessories together with a central hub and then monitor and control them with communications packets in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible, and robust manner.

15. Regarding claim 26, Duncan discloses an adapter for a telecommunications headset (col. 1 line 39-col. 2 line 4 and col. 2 lines 49-65). Duncan possibly does not disclose having an interface bus, the interface bus capable of transmitting and receiving a plurality of communications packets for controlling and monitoring the telephone headset accessory. Lincoln discloses an interface bus, the interface bus capable of transmitting and receiving a plurality of

communications packets for controlling and monitoring an accessory (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, robust, and allows units to be connected and disconnected without disrupting overall communication. It would have been obvious to one of ordinary skill in the art of communications to have an interface bus, the interface bus capable of transmitting and receiving a plurality of communications packets for controlling and monitoring an accessory in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible, and robust manner.

16. Regarding claim 33, Duncan discloses an adapter for a telecommunications headset (col. 1 line 39-col. 2 line 4 and col. 2 lines 49-65). Duncan possibly does not disclose having an interface bus that transmits and receives a plurality of communications packets between an adapter and an accessory, thereby allowing the adapter to control, monitor, and test the accessory. Lincoln discloses an interface bus that transmits and receives a plurality of communications packets between a headset adapter and a headset accessory, thereby allowing the headset adapter to control, test, and monitor the accessory (col. 3 lines 25-34, col. 5 lines 14-25, and col. 22 lines 12-22 and lines 52-62) where testing involves ensuring that the accessories are operating correctly according to set parameters. Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to have an interface bus that transmits and receives a plurality of

communications packets between an adapter and an accessory, thereby allowing the adapter to control, monitor, and test the accessory in order to allow a user to tailor the accessories to the user's desires through the controller which controls the accessories and ensures that the accessories are acting in accordance to the user's parameters.

17. Regarding claim 40, Duncan discloses a telecommunications headset including an adapter base and a communication line (col. 1 line 39-col. 2 line 4 and col. 2 lines 49-65). Duncan possibly does not disclose a method for controlling and monitoring an accessory, the method comprising: detecting whether an accessory is coupled to an interface bus and transmitting a command or status request signal from the adapter base over the interface bus and to the accessory in order to control or monitor operation of the accessory. Lincoln discloses a method for controlling and monitoring an accessory, the method comprising: detecting whether an accessory is coupled to an interface bus and transmitting a command or status request signal from the adapter base over the interface bus and to the accessory in order to control or monitor operation of the accessory (col. 2 lines 11-16, col. 3 lines 25-34, col. 5 lines 14-25, and col. 11 line 54-col. 12 line 34) where, as broadly interpreted, the initial detection can be initiated by the accessory (remote unit) or the adapter (controller). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is well known to use a bus as a communication medium because a bus is easily implemented and allows units to be connected and disconnected without disrupting overall communication. Thus, it is well known when using a bus to have a central controller detect whether a remote unit is coupled or not in order to allow the central controller to know which units it currently can gain control over. It would have been obvious to one of ordinary skill in the art of communications to detect whether

an accessory is coupled to an interface bus and transmit a command or status request signal from the adapter base over the interface bus and to the accessory in order to allow the base to control or monitor operation of the accessory so that a user can tailor the environment from the central controller.

18. Regarding claim 49, referring to claim 40, Duncan in view of Lincoln discloses having an acknowledgement sent after a unit receives a message (Lincoln: col. 7 lines 53-55). Duncan in view of Lincoln possibly does not disclose holding the interface bus at a predetermined voltage level for a predetermined amount of time after a command signal is sent in order to transmit an acknowledgement. However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of critically in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The length of the duration and the value of the acknowledgement are not critical to the disclosed method, therefore any length or value indicating an acknowledgement would have been obvious.

19. Regarding claim 56, Duncan discloses a telecommunications headset including an adapter base and a communication line (col. 1 line 39-col. 2 line 4 and col. 2 lines 49-65). Duncan possibly does not disclose a communications protocol comprising a plurality of commands to control, monitor, or identify any one of a plurality of accessories coupled to an

interface bus. Lincoln discloses a communications protocol comprising a plurality of commands to control, monitor, or identify any one of a plurality of accessories coupled to an interface bus (col. 2 lines 11-16, col. 3 lines 25-34, col. 5 lines 14-25, and col. 11 line 54-col. 12 line 34). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is well known to use a bus as a communication medium because a bus is easily implemented and allows units to be connected and disconnected without disrupting overall communication. Thus, it is well known when using a bus to have a central controller detect whether a remote unit is coupled or not in order to allow the central controller to know which units it currently can gain control over. It would have been obvious to one of ordinary skill in the art of communications to detect whether an accessory is coupled to an interface bus and transmit a command or status request signal from the adapter base over the interface bus and to the accessory in order to allow the base to control or monitor operation of the accessory so that a user can tailor the environment from the central controller.

20. Regarding claim 66, Duncan discloses a telephone headset (col. 1 lines 39-44); a headset adapter coupled to the telephone headset and having an accessory interface for transmitting and receiving communication signals (col. 1 line 39-col. 2 line 4 and col. 2 lines col. 2 lines 54-59) where a headset system is taken to be a headset along with other accessories and the presence of a bi-directional communication link indicates the use of communication signals; and an accessory for the telephone headset coupled to the accessory interface of the headset adapter, wherein the phone can be directly controlled and monitored by the accessory via transmission of communication signals between the phone and the accessory through the interface (col. 2 lines 49-65). Duncan does not expressly state having a digital interface bus adapted for coupling at

least one accessory to the digital interface bus in order to transmit data packets between the adapter base and the accessory, thereby allowing the adapter base to control and monitor operations of the accessory; and a communications protocol defining a packet structure for the data packets transmitted between the telephone adapter base and the accessory, via the interface bus, the communications protocol including at least one command for controlling an operation of the accessory or monitoring the status of the accessory. Lincoln discloses a system and method for communication between a central unit and accessories in which accessories are monitored and controlled by a central unit (adapter) through an accessory interface bus which is used for transmitting and receiving communications packets (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln also discloses a communications protocol defining a packet structure for the data packets transmitted between the telephone adapter base and the accessory, via the interface bus, the communications protocol including at least one command for controlling an operation of the accessory or monitoring the status of the accessory (col. 5 lines 14-17 and col. 1 line 66-col. 2 line 16). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to tie all of the accessories together with a central hub and then monitor and control them with communications packets in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible, and robust manner.

21. Regarding claim 70, Duncan discloses a telephone headset (col. 1 lines 39-44); a headset adapter coupled to the telephone headset and having an accessory interface for transmitting and

receiving communication signals (col. 1 line 39-col. 2 line 4 and col. 2 lines col. 2 lines 54-59) where a headset system is taken to be a headset along with other accessories and the presence of a bi-directional communication link indicates the use of communication signals across a link; and an accessory for the telephone headset coupled to the accessory interface of the headset adapter, wherein the phone can be directly controlled and monitored by the accessory via transmission of communication signals between the phone and the accessory through the interface (col. 2 lines 49-65). Duncan possibly does not disclose having the adapter comprise: a micro-controller and an interface bus coupled to the micro-controller and adapted to couple to the accessory for transmitting and receiving communications packets between the micro-controller and the accessory in order to test the accessory and verify proper operation of the accessory. Lincoln discloses a central unit (adapter) comprising: an interface bus; and a micro-controller coupled to the interface bus, for controlling and monitoring at least one accessory which is coupled to the interface bus (col. 4 line 61-col. 5 line 13), wherein the micro-controller controls and monitors the accessory through the bi-directional transmission of communication packets between the micro-controller and the accessory via the interface bus (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln also discloses having the micro-controller test the accessories to ensure proper operation (col. 22 lines 23-62) where the controller tests the accessory to determine if the accessory is acting outside of its modeled parameters (verify proper operation) where it is obvious that this testing is performed using packets because communication within the system is done through packets. Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33) and to ensure that the system is operating properly. It is also well known to use shared medium (i.e. a bus) packet communication because

such communication is simple, flexible, and robust. It is also well known to use micro-controllers because micro-controllers are a cheap, accurate, and reliable way to implement designs. It would have been obvious to one of ordinary skill in the art of communications to implement the adapter using a micro-controller and an interface bus coupled to the micro-controller and adapted to couple to the accessory for transmitting and receiving communications packets between the micro-controller and the accessory in order to test the accessory and verify proper operation of the accessory in order to allow a user to tailor the environment to suit the user's needs, to easily implement such a system in a simple, flexible and robust manner through cheap, accurate, and reliable micro-controllers, and to ensure that the system is operating properly through the transmission of testing packets.

22. Regarding claim 71, referring to claim 70, Duncan discloses having at least one bi-directional signaling line for transmitting and receiving communications signals between the accessory and the adapter (col. 2 lines 1-4). Duncan does not disclose transmitting and receiving communications packets over the bus. Lincoln discloses a system and method for communication through an accessory interface bus which is used for transmitting and receiving communications packets (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to tie all of the accessories together with a central hub and then monitor and control them with communications packets in order to allow a user to tailor the

environment to suit the user's needs and to easily implement such a system in a simple, flexible, and robust manner.

23. Regarding claim 75, Duncan discloses coupling a headset accessory to a headset adapter having an accessory interface and transmitting and receiving communication signals between the accessory and the adapter (col. 1 line 39-col. 2 line 4 and col. 2 lines col. 2 lines 49-59) where a headset system is taken to be a headset along with other accessories and the presence of a bi-directional communication link indicates the use of communication signals across a link. Duncan possibly does not disclose having the adapter comprise a micro-controller and an interface bus and transmitting and receiving communications packets between the micro-controller in order to test the accessory and verify proper operation of the accessory. Lincoln discloses a central unit (adapter) comprising an interface bus and a micro-controller coupled to the interface bus, for controlling and monitoring at least one accessory which is coupled to the interface bus (col. 4 line 61-col. 5 line 13), wherein the micro-controller controls and monitors the accessory through the bi-directional transmission of communication packets between the micro-controller and the accessory via the interface bus (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln also discloses having the micro-controller test the accessories to ensure proper operation (col. 22 lines 23-62) where the controller tests the accessory to determine if the accessory is acting outside of its modeled parameters (verify proper operation) where it is obvious that this testing is performed using packets because communication within the system is done through packets. Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33) and to ensure that the system is operating properly. It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and

robust. It is also well known to use micro-controllers because micro-controllers are a cheap, accurate, and reliable way to implement designs. It would have been obvious to one of ordinary skill in the art of communications to couple the accessory to the adapter which contains an interface bus and a micro-controller and to transmit and receive communications packets between the micro-controller and the accessory in order to test the accessory in order to allow a user to tailor the environment to suit the user's needs, to easily implement such a system in a simple, flexible and robust manner through cheap, accurate, and reliable micro-controllers, and to ensure that the system is operating properly through the transmission of testing packets.

24. Regarding claim 76, referring to claim 75, Duncan discloses having at least one bi-directional signaling line for transmitting and receiving communications signals between the accessory and the adapter (col. 2 lines 1-4). Duncan does not disclose transmitting and receiving communications packets over the bus. Lincoln discloses a system and method for communication through an accessory interface bus which is used for transmitting and receiving communications packets (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to tie all of the accessories together with a central hub and then monitor and control them with communications packets in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible, and robust manner.

25. Claims 4, 5, 17, 18, 28, 29, 34, 35, 41, 43, 72, 73, 77, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) as applied to claims 1, 15, 26, 33, 40, and 70 above, and further in view of King (USPN 3,793,488).

26. Regarding claim 4, referring to claim 1, Duncan in view of Lincoln possibly does not disclose that each communication packet includes a synch pulse which defines a transmission rate for the communication packet; however, it is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal. This is evidenced by King (col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal.

27. Regarding claim 5, referring to claim 4, King discloses having a rate bit having a bit period which defines the bit synchronization for the communications packet (col. 2 lines 31-34). It is obvious that in order to achieve bit synchronization, the transmission rate needs to be determined so that the receiver will know when to expect the next bit and so when to sample the transmitted signal. King implements synchronization with a rate bit in order to minimize the amount of hardware used to generate the transmitted signal (col. 1 line 64-col. 2 line 6). It would have been obvious to one of ordinary skill in the art of packet communications to have the synch pulse include a rate bit having a bit period which defines the transmission rate for the

communication packet in order to minimize the amount of hardware used to generate the transmitted signal.

28. Regarding claim 17, referring to claim 15, Duncan in view of Lincoln possibly does not disclose that each communication packet includes a synch pulse which defines a transmission rate for the communication packet; however, it is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal. This is evidenced by King (col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal.

29. Regarding claim 18, referring to claim 17, King discloses having a rate bit having a bit period which defines the bit synchronization for the communications packet (col. 2 lines 31-34). It is obvious that in order to achieve bit synchronization, the transmission rate needs to be determined so that the receiver will know when to expect the next bit and so when to sample the transmitted signal. King implements synchronization with a rate bit in order to minimize the amount of hardware used to generate the transmitted signal (col. 1 line 64-col. 2 line 6). It would have been obvious to one of ordinary skill in the art of packet communications to have the synch pulse include a rate bit having a bit period which defines the transmission rate for the communication packet in order to minimize the amount of hardware used to generate the transmitted signal.

30. Regarding claim 28, referring to claim 26, Duncan in view of Lincoln possibly does not disclose that each communication packet in the plurality of communications packets includes a synch pulse which defines a transmission rate at which the communication packet is transmitted; however, it is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal. This is evidenced by King (col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal.

31. Regarding claim 29, referring to claim 28, King discloses having a rate bit having a bit period which defines the bit synchronization for the communications packet (col. 2 lines 31-34). It is obvious that in order to achieve bit synchronization, the transmission rate needs to be determined so that the receiver will know when to expect the next bit and so when to sample the transmitted signal. King implements synchronization with a rate bit in order to minimize the amount of hardware used to generate the transmitted signal (col. 1 line 64-col. 2 line 6). It would have been obvious to one of ordinary skill in the art of packet communications to have the synch pulse include a rate bit having a bit period which defines the transmission rate for the communication packet in order to minimize the amount of hardware used to generate the transmitted signal.

32. Regarding claim 34, referring to claim 33, Duncan in view of Lincoln possibly does not disclose that each communication packet includes a synch pulse which defines a transmission rate for the communication packet; however, it is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal. This is evidenced by King (col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal.

33. Regarding claim 35, referring to claim 34, King discloses having a rate bit having a bit period which defines the bit synchronization for the communications packet (col. 2 lines 31-34). It is obvious that in order to achieve bit synchronization, the transmission rate needs to be determined so that the receiver will know when to expect the next bit and so when to sample the transmitted signal. King implements synchronization with a rate bit in order to minimize the amount of hardware used to generate the transmitted signal (col. 1 line 64-col. 2 line 6). It would have been obvious to one of ordinary skill in the art of packet communications to have the synch pulse include a rate bit having a bit period which defines the transmission rate for the communication packet in order to minimize the amount of hardware used to generate the transmitted signal.

34. Regarding claim 41, referring to claim 40, Duncan in view of Lincoln discloses that the command or request signal is a communications packet (Lincoln: col. 5 lines 14-18) where, as

broadly interpreted, a request is a type of command. Duncan in view of Lincoln possibly does not disclose that each communication packet includes a synch pulse for defining a transmission rate of the communication packet; however it is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal. This is evidenced by King (col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal. It is also obvious that since the synch pulse defines the transmission rate, the adapter base would communicate with the accessory at its own transmission rate which is the transmission rate defined by the synch pulse.

35. Regarding claim 43, referring to claim 40, Duncan in view of Lincoln discloses detecting any errors in the transmission of the command or status request signal from the adapter base over the interface bus (Lincoln: col. 5 lines 14-18 and col. 6 lines 5-21).

36. Regarding claim 72, referring to claim 70, Duncan in view of Lincoln possibly does not disclose that each communication packet includes a synch pulse which defines a transmission rate for the communication packet; however, it is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal. This is evidenced by King

(col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal.

37. Regarding claim 73, referring to claim 72, King discloses having a rate bit having a bit period which defines the bit synchronization for the communications packet (col. 2 lines 31-34). It is obvious that in order to achieve bit synchronization, the transmission rate needs to be determined so that the receiver will know when to expect the next bit and so when to sample the transmitted signal. King implements synchronization with a rate bit in order to minimize the amount of hardware used to generate the transmitted signal (col. 1 line 64-col. 2 line 6). It would have been obvious to one of ordinary skill in the art of packet communications to have the synch pulse include a rate bit having a bit period which defines the transmission rate for the communication packet in order to minimize the amount of hardware used to generate the transmitted signal.

38. Regarding claim 77, referring to claim 75, Duncan in view of Lincoln possibly does not disclose that each communication packet includes a synch pulse which defines a transmission rate for the communication packet; however, it is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal. This is evidenced by King (col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet

communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal.

39. Regarding claim 78, referring to claim 77, King discloses having a rate bit having a bit period which defines the bit synchronization for the communications packet (col. 2 lines 31-34). It is obvious that in order to achieve bit synchronization, the transmission rate needs to be determined so that the receiver will know when to expect the next bit and so when to sample the transmitted signal. King implements synchronization with a rate bit in order to minimize the amount of hardware used to generate the transmitted signal (col. 1 line 64-col. 2 line 6). It would have been obvious to one of ordinary skill in the art of packet communications to have the synch pulse include a rate bit having a bit period which defines the transmission rate for the communication packet in order to minimize the amount of hardware used to generate the transmitted signal.

40. Claims 7, 8, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) in further view of King (USPN 3,793,488) as applied to claims 5 and 17 above, and further in view of Miesterfeld et al (USPN 4,706,082).

41. Regarding claim 7, referring to claim 5, Duncan in view of Lincoln in further view of King possibly does not contain having the synch pulse hold the bus at a predetermined level for a predetermined amount of time before the rate bit of the communications packet is transmitted over the accessory bus thereby preventing collision between communications packets. The use of a bus for the packet communication makes the possibility for packet collision likely. It is well known, through the use of sensing, to have a transmitter check to see if the bus is in use before

trying to transmit; however, with this method collisions can still occur if two transmitters begin transmission almost simultaneously. Miesterfeld discloses having in every packet start bits, which are used by a detector to determine if another transmitter has started to transmit almost simultaneously, so that collisions due to an almost simultaneous transmission are avoided (col. 5 lines 23-39). These start bits occur at the beginning of the message and it would be obvious to include the start bits in the synch pulse which also comes at the beginning of the message. Also because the start bits are used to indicate a beginning of a message and aid in determining if there is a collision, it would be obvious to locate the start bits before the rate bit, which is an important part of the message and so should be sent only after it is determined that the bus is clear. Thus it would have been obvious to one of ordinary skill in the art of communications to have the synch pulse hold the bus at a predetermined level (have start bits) for a predetermined amount of time before the rate bit of the communications packet is transmitted over the accessory bus thereby preventing collision between communications packets.

42. Regarding claim 8, referring to claim 7, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of critically in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The length of the

duration and the value of the start bits are not critical to the operation of the disclosed system, and therefore it would be obvious to use any number of bit periods or any value.

43. Regarding claim 20, referring to claim 17, Duncan in view of Lincoln in further view of King possibly does not contain having the synch pulse hold the bus at a predetermined level for a predetermined amount of time before each communications packet is transmitted over the accessory bus in order to gain bus control. The use of a bus for the packet communication makes the possibility for packet collision likely. It is well known, through the use of sensing, to have a transmitter check to see if the bus is in use before trying to transmit; however, with this method collisions can still occur if two transmitters begin transmission almost simultaneously. Miesterfeld discloses having in every packet start bits, which are used by a detector to determine if another transmitter has started to transmit almost simultaneously, so that collisions due to an almost simultaneous transmission are avoided (col. 5 lines 23-39). This is done by one transmitter gaining control of the bus by signaling its intent to transmit with the start bits. These start bits occur at the beginning of the message and it would be obvious to include the start bits in the synch pulse which also comes at the beginning of the message. Thus it would have been obvious to one of ordinary skill in the art of communications to have the synch pulse hold the bus at a predetermined level (have start bits) for a predetermined amount of time before each communications packet is transmitted over the accessory bus in order to gain bus control and thus avoid potential collisions.

44. Claims 9, 10, 21, 22, 30, 31, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) as

applied to claims 1, 15, 26, and 33 above, and further in view of Waechter et al (USPN 4,943,963).

45. Regarding claim 9, referring to claim 1, Duncan in view of Lincoln discloses that the communication packet includes an address and a command or data (Lincoln: col. 5 lines 14-18). Duncan in view of Lincoln possibly does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet. Waechter discloses the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5 lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated.

46. Regarding claim 10, referring to claim 9, Duncan in view of Lincoln discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Lincoln: col. 5 lines 14-18).

47. Regarding claim 21, referring to claim 15, Duncan in view of Lincoln discloses that the communication packet includes an address and a command or data (Lincoln: col. 5 lines 14-18). Duncan in view of Lincoln possibly does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet. Waechter discloses the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5 lines 21-53). It would have

been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated.

48. Regarding claim 22, referring to claim 21, Duncan in view of Lincoln discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Lincoln: col. 5 lines 14-18).

49. Regarding claim 30, referring to claim 26, Duncan in view of Lincoln discloses that the communication packet includes an address and a command or data (Lincoln: col. 5 lines 14-18). Duncan in view of Lincoln possibly does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet. Waechter discloses the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5 lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated. It is also generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of critically in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6

(CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The length of the destination address is not deemed essential to the operation of the disclosed interface bus, and so it would be obvious to have the address be any length including a byte.

50. Regarding claim 31, referring to claim 30, Duncan in view of Lincoln discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Lincoln: col. 5 lines 14-18).

51. Regarding claim 36, referring to claim 33, Duncan in view of Lincoln discloses that the communication packet includes an address and a command or data (Lincoln: col. 5 lines 14-18). Duncan in view of Lincoln possibly does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet. Waechter discloses the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5 lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated.

52. Regarding claim 37, referring to claim 36, Duncan in view of Lincoln discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Lincoln: col. 5 lines 14-18).

53. Claims 11, 12, 23, 24, 38, 39, are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) as applied to claim 1, 15, and 33 above, and further in view of Feher (USPN 6,198,777).

54. Regarding claim 11, referring to claim 1, Duncan in view of Lincoln discloses that each communication packet includes a plurality of bits where each bit in the plurality of bits has an assigned value of zero or one (Lincoln: Fig. 12 and col. 4 lines 43-60). Duncan in view of Lincoln possibly does not disclose that each bit in the plurality of bits includes a first signal portion having a first logic level and a second signal portion having a second logic level and the assigned value of zero or one is assigned to each bit based upon the duration of either the first signal portion or the second signal portion. Feher discloses having each bit include a first signal portion having a first logic level and a second signal portion having a second logic level and the assigned value of zero or one is assigned to each bit based upon the duration of either the first signal portion or the second signal portion (col. 17 lines 42-51). Feher does this as a way to implement a "power efficient and spectral efficient system" (col. 6 lines 22-26). It would have been obvious to one of ordinary skill in the art of communications to have each bit include a first signal portion having a first logic level and a second signal portion having a second logic level and the assigned value of zero or one be assigned to each bit based upon the duration of either the first signal portion or the second signal portion in order to have the line coding be power efficient and spectral efficient.

55. Regarding claim 12, referring to claim 11, Duncan in view of Lincoln possibly does not disclose that if the duration of the at least one portion falls within a first range the bit is assigned a value of zero and if the duration of the at least one portion falls within a second range, the bit is assigned a value of one. Feher discloses that if the duration of the at least one portion falls within a first range the bit is assigned a value of zero and if the duration of the at least one portion falls within a second range, the bit is assigned a value of one (col. 17 lines 42-51). Feher does this as a

way to implement a "power efficient and spectral efficient system" (col. 6 lines 22-26). It would have been obvious to one of ordinary skill in the art of communications to have the bit assigned a value of zero if the duration of the at least one portion falls within a first range and to have the bit assigned a value of one if the duration of the at least one portion falls within a second range in order to have the line coding be power efficient and spectral efficient.

56. Regarding claim 23, referring to claim 15, Duncan in view of Lincoln discloses that each communication packet includes a plurality of bits where each bit in the plurality of bits has an assigned value of zero or one (Lincoln: Fig. 12 and col. 4 lines 43-60). Duncan in view of Lincoln possibly does not disclose that each bit in the plurality of bits includes a first signal portion having a first logic level and a second signal portion having a second logic level and the assigned value of zero or one is assigned to each bit based upon the duration of either the first signal portion or the second signal portion. Feher discloses having each bit include a first signal portion having a first logic level and a second signal portion having a second logic level and the assigned value of zero or one is assigned to each bit based upon the duration of either the first signal portion or the second signal portion (col. 17 lines 42-51). Feher does this as a way to implement a "power efficient and spectral efficient system" (col. 6 lines 22-26). It would have been obvious to one of ordinary skill in the art of communications to have each bit include a first signal portion having a first logic level and a second signal portion having a second logic level and the assigned value of zero or one be assigned to each bit based upon the duration of either the first signal portion or the second signal portion in order to have the line coding be power efficient and spectral efficient.

57. Regarding claim 24, referring to claim 23, Duncan in view of Lincoln possibly does not disclose that if the duration of the at least one portion falls within a first range the bit is assigned a value of zero and if the duration of the at least one portion falls within a second range, the bit is assigned a value of one. Feher discloses that if the duration of the at least one portion falls within a first range the bit is assigned a value of zero and if the duration of the at least one portion falls within a second range, the bit is assigned a value of one (col. 17 lines 42-51). Feher does this as a way to implement a "power efficient and spectral efficient system" (col. 6 lines 22-26). It would have been obvious to one of ordinary skill in the art of communications to have the bit assigned a value of zero if the duration of the at least one portion falls within a first range and to have the bit assigned a value of one if the duration of the at least one portion falls within a second range in order to have the line coding be power efficient and spectral efficient.

58. Regarding claim 38, referring to claim 33, Duncan in view of Lincoln discloses that each communication packet includes a plurality of bits where each bit in the plurality of bits has an assigned value of zero or one (Lincoln: Fig. 12 and col. 4 lines 43-60). Duncan in view of Lincoln possibly does not disclose that each bit in the plurality of bits includes a high bit portion and a low bit portion, with the duration of at least one bit portion determining the value of one or zero which is assigned to the bit such that if the duration of such portion falls within a first range the bit is assigned a value of zero and if the duration of such portion falls within a second range, the bit is assigned a value of one. Feher discloses having each bit in the plurality of bits includes a high bit portion and a low bit portion, with the duration of at least one bit portion determining the value of one or zero which is assigned to the bit such that if the duration of such portion falls within a first range the bit is assigned a value of zero and if the duration of such portion falls

within a second range, the bit is assigned a value of one (col. 17 lines 42-51). Feher does this as a way to implement a "power efficient and spectral efficient system" (col. 6 lines 22-26). It would have been obvious to one of ordinary skill in the art of communications to have each bit in the plurality of bits includes a high bit portion and a low bit portion, with the duration of at least one bit portion determining the value of one or zero which is assigned to the bit such that if the duration of such portion falls within a first range the bit is assigned a value of zero and if the duration of such portion falls within a second range, the bit is assigned a value of one in order to have the line coding be power efficient and spectral efficient.

59. Regarding claim 39, referring to claim 38, Feher discloses having each bit in a plurality of bits have a rising edge and a falling edge within a single bit period (col. 17 lines 42-51). Feher does not expressly state that the rising edge and falling edge can be used to synchronize transmission of the communications packet after each bit period; however, it is well known in the art of communications to use transitions (rising or falling edge) within a bit period to synchronize a signal after each bit period. These "self-clocking" signals are used because they do not require a separate clocking signal to be transmitted. Therefore it would be obvious to one of ordinary skill in the art of communications that the rising edge and falling edge could be used to synchronize transmission of the communications packet after each bit period in order to generate a "self-clocking" signal which does not need a separate clocking signal to be transmitted.

60. Claims 42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) in further view of King (USPN 3,793,488) as applied to claim 41 above, and further in view of Waechter et al (USPN 4,943,963).

61. Regarding claim 42, referring to claim 41, Duncan in view of Lincoln in further view of King possibly does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet. Waechter discloses a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5 lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated.

62. Regarding claim 44, referring to claim 42, Duncan in view of Lincoln discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Lincoln: col. 5 lines 14-18).

63. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) as applied to claim 40 above, and further in view of Wandel (USPN 6,034,623).

64. Regarding claim 45, referring to claim 40, Duncan in view of Lincoln discloses receiving a response signal from the accessory (Lincoln: col. 6 lines 44-46). Duncan in view of Lincoln does not expressly state returning information on the current status of the accessory when a status request is transmitted. However, status request messages are well known in the art as a way for a controller to keep informed as to the current condition of another unit, as is evidenced by Wandel (col. 10 lines 40-44). It would have been obvious to one of ordinary skill in the art of communications to use status request messages to have another unit return information on the

current status of that unit as a way for a controller to keep informed as to the current condition of another unit.

65. Claims 46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) in further view of Wandel (USPN 6,034,623) as applied to claim 45 above, and further in view of King (USPN 3,793,488).

66. Regarding claim 46, referring to claim 45, Duncan in view of Lincoln in further view of Wandel possibly does not disclose that each communication packet includes a synch pulse which defines a transmission rate for the communication packet; however, it is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal. This is evidenced by King (col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal. Also the accessory communicates with the adapter at its own communication rate since each communications packet includes a synch pulse added by the transmitting unit which defines the transmission rate for the packet. The use of a synch pulse defines the transmission rate for each packet, and so, as broadly interpreted, the accessory and the adapter each communicate at its own transmission rate because each defines the transmission rate through the synch pulse. Even if the transmission rates are the same, the accessory and the adapter each communicate at its own transmission rate but each happen to define the same transmission rate.

67. Regarding claim 48, referring to claim 46, Duncan in view of Lincoln in further view of Wandel in further view of King discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Lincoln: col. 5 lines 14-18).

68. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) in further view of Wandel (USPN 6,034,623) as applied to claim 45 above, and further in view of Waechter et al (USPN 4,943,963).

69. Regarding claim 47, referring to claim 45, Duncan in view of Lincoln in further view of Wandel discloses that the communication packet includes data (Lincoln: col. 5 lines 14-18 and col. 6 lines 44-46). Duncan in view of Lincoln in further view of Wandel possibly does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet. Waechter discloses the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5 lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated.

70. Claims 51, 52, 68, 69, are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) in further view of King (USPN 3,793,488) in further view of Waechter et al (USPN 4,943,963).

71. Regarding claim 51, Duncan discloses an adapter for a telecommunications headset (col. 1 line 39-col. 2 line 4 and col. 2 lines 49-65). Lincoln discloses a system and method for communication between a central unit and accessories in which accessories are monitored and controlled by a central unit (adapter) through an accessory interface bus which is used for transmitting and receiving communications packets (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to tie all of the accessories together with a central hub and then monitor and control them with communications packets in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible and robust manner. Lincoln also discloses that the communication packet includes an address and a command or data (Lincoln: col. 5 lines 14-18). Duncan in view of Lincoln possibly does not disclose having an interface bus capable of transmitting and receiving a plurality of communications packets, the data packets comprising: a synch pulse having a rate bit that defines a rate at which the data packet is being transmitted; a source address byte that represents a bus address of a device from which the data packet was transmitted; and a destination address byte that represents a bus address of the accessory to which the data packet is being transmitted. It is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be

able to properly read a transmitted signal. This is evidenced by King (col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal. Waechter discloses a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5 lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated. It is also generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of critically in a particular recited value. The burden of showing criticality on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The length of the source and destination address is not deemed essential to the operation of the disclosed interface bus, and so it would be obvious to have the address be any length including a byte.

72. Regarding claim 52, referring to claim 51, Duncan in view of Lincoln in further view of King in further view of Waechter discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Lincoln: col. 5 lines 14-18).

73. Regarding claim 68, referring to claim 66, Duncan discloses an adapter for a telecommunications headset (col. 1 line 39-col. 2 line 4 and col. 2 lines 49-65). Lincoln discloses a system and method for communication between a central unit and accessories in which accessories are monitored and controlled by a central unit (adapter) through an accessory interface bus which is used for transmitting and receiving communications packets (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to tie all of the accessories together with a central hub and then monitor and control them with communications packets in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible and robust manner. Lincoln also discloses that the communication packet includes an address and a command or data (Lincoln: col. 5 lines 14-18). Duncan in view of Lincoln possibly does not disclose having an interface bus capable of transmitting and receiving a plurality of communications packets, the data packets comprising: a synch pulse having a rate bit that defines a rate at which the data packet is being transmitted; a source address byte that represents a bus address of a device from which the data packet was transmitted; and a destination address byte that represents a bus address of the accessory to which the data packet is being transmitted. It is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver

will not be able to properly read a transmitted signal. This is evidenced by King (col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal. Waechter discloses a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5 lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated. It is also generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of critically in a particular recited value. The burden of showing criticality on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The length of the source and destination address is not deemed essential to the operation of the disclosed interface bus, and so it would be obvious to have the address be any length including a byte.

74. Regarding claim 69, referring to claim 66, Duncan in view of Lincoln in further view of King in further view of Waechter discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Lincoln: col. 5 lines 14-18).

75. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) in further view of King (USPN 3,793,488) in further view of Waechter et al (USPN 4,943,963) as applied to claim 51 above, and further in view of Feher (USPN 6,198,777).

76. Regarding claim 53, referring to claim 51, Duncan in view of Lincoln in further view of King in further view of Waechter discloses that each communication packet includes a plurality of bits where each bit in the plurality of bits has an assigned value of zero or one (Lincoln: Fig. 12 and col. 4 lines 43-60). Duncan in view of Lincoln Lincoln in further view of King in further view of Waechter possibly does not disclose that each bit in the plurality of bits includes a high bit portion and a low bit portion within a single bit period, with the duration of at least one bit portion determining the value of one or zero which is assigned to the bit such that if the duration of such portion falls within a first range the bit is assigned a value of zero and if the duration of such portion falls within a second range, the bit is assigned a value of one. Feher discloses having each bit in the plurality of bits includes a high bit portion and a low bit portion, with the duration of at least one bit portion determining the value of one or zero which is assigned to the bit such that if the duration of such portion falls within a first range the bit is assigned a value of zero and if the duration of such portion falls within a second range, the bit is assigned a value of one (col. 17 lines 42-51). Feher does this as a way to implement a "power efficient and spectral efficient system" (col. 6 lines 22-26). It would have been obvious to one of ordinary skill in the art of communications to have each bit in the plurality of bits includes a high bit portion and a low bit portion, with the duration of at least one bit portion determining the value of one or zero which is assigned to the bit such that if the duration of such portion falls within a first range the

bit is assigned a value of zero and if the duration of such portion falls within a second range, the bit is assigned a value of one in order to have the line coding be power efficient and spectral efficient.

77. Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feher (USPN 6,198,777).

78. Regarding claim 55, Feher discloses having each bit in the plurality of bits include a high bit portion and a low bit portion, with the duration of at least one bit portion determining the value of one or zero which is assigned to the bit such that if the duration of such portion falls within a first range the bit is assigned a value of zero and if the duration of such portion falls within a second range, the bit is assigned a value of one (col. 17 lines 42-51). Feher does this as a way to implement a "power efficient and spectral efficient system" (col. 6 lines 22-26). It is obvious that Feher's system is used for communication. If the bit is assigned its value by the width of a portion of either a high or low portions, then it is obvious that in order to properly receive the bit the receiver would measure the width of either the high portion or the low portion and assign a bit value of one to the data bit if the width measured falls within a first predetermined range or assigning a bit value of zero to the data bit if the width measured falls within a second predetermined range.

79. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) in further view of Wandel (USPN 6,034,623) in further view of Kou (USPN 6,085,265) in further view of Humpleman (USPN 5,940,387) in further view of Andrews et al (USPN 5,848,143) in further view of Houck et al (USPN 5,488,693) in further view of Tanaka et al (USPN 5,003,536).

80. Regarding claim 63, Duncan discloses a telephone headset (col. 1 lines 39-44); a headset adapter coupled to the telephone headset and having an accessory interface for transmitting and receiving communication signals (col. 1 line 39-col. 2 line 4 and col. 2 lines 54-59) where a headset system is taken to be a headset along with other accessories and the presence of a bi-directional communication link indicates the use of communication signals; and an accessory for the telephone headset coupled to the accessory interface of the headset adapter, wherein the phone can be directly controlled and monitored by the accessory via transmission of communication signals between the phone and the accessory through the interface (col. 2 lines 49-65). Duncan possibly does not disclose having an accessory interface bus for transmitting and receiving communications packets or having the accessory be directly controlled and monitored by the adapter. Lincoln discloses a system and method for communication between a central unit and accessories in which accessories are monitored and controlled by a central unit (adapter) through an accessory interface bus which is used for transmitting and receiving communications packets (col. 3 lines 25-34 and col. 5 lines 14-25). Lincoln does this to allow a user to "tailor the environment to conform to the user's lifestyle" (col. 3 lines 31-33). It is also well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust. It would have been obvious to one of ordinary skill in the art of communications to tie all of the accessories together with a central hub and then monitor and control them with communications packets in order to allow a user to tailor the environment to suit the user's needs and to easily implement such a system in a simple, flexible, and robust manner. Duncan in view of Lincoln possibly does not disclose having a communications protocol including at least one command selected from the group consisting of: a command for

turning an accessory on or off; a command for polling the bus in order to determine what accessories are coupled to the bus; a command for simulating operations as if a button, a switch, or a dial on the accessory had been activated; a command for simulating operations as if a button, a switch, or a dial on the adapter had been activated; a command for resetting an accessory; a command for determining the status of an accessory; a command for reading from or writing to a memory structure within an accessory; and a command for determining the identity and version of each accessory. However it is well known in the art of communications to have a command for turning an accessory on or off, as is evidenced by Wandel (col. 10 lines 40-44) in order to save power; a command for polling the bus in order to determine what accessories are coupled to the bus, as is evidenced by Kou (col. 2 lines 45-57) in order to what devices and the characteristics of the devices coupled to the bus; a command for simulating operations as if a button, a switch, or a dial on the accessory had been activated, as is evidenced by Humpleman (Fig. 8 and col. 7 lines 1-13); a command for simulating operations as if a button, a switch, or a dial on the adapter had been activated, as is evidenced by Andrews (col. 8 lines 40-50) in order to allow the controller to be used even if a user is not in physical contact with the controller; a command for resetting an accessory, as is evidenced by Houck (col. 6 lines 5-22) in order to allow a device that is no longer operating correctly to be reset; a command for determining the status of an accessory, as is evidenced by Wandel (col. 10 lines 40-44) in order to allow a controller to properly communicate with each device; a command for reading from or writing to a memory structure within an accessory, as is evidenced by Tanaka (col. 4 lines 1-29) in order to allow the accessory to store information relating to future communications with the controller;

and a command for determining the identity and version of each accessory, as is evidenced by Kou (col. 2 lines 45-57) so the controller can properly communicate with each device.

81. Claims 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) in further view of Wandel (USPN 6,034,623) in further view of Kou (USPN 6,085,265) in further view of Humpleman (USPN 5,940,387) in further view of Andrews et al (USPN 5,848,143) in further view of Houck et al (USPN 5,488,693) in further view of Tanaka et al (USPN 5,003,536) as applied to claim 63 above, and further in view of King (USPN 3,793,488) in further view of Waechter et al (USPN 4,943,963).

82. Regarding claim 64, referring to claim 63, Duncan in view of Lincoln in further view of Wandel in further view of Kou in further view of Humpleman in further view of Andrews in further view of Houck in further view of Tanaka possibly does not disclose having an interface bus capable of transmitting and receiving a plurality of communications packets, the data packets comprising: a synch pulse having a rate bit that defines a rate at which the data packet is being transmitted; a source address byte that represents a bus address of a device from which the data packet was transmitted; and a destination address byte that represents a bus address of the accessory to which the data packet is being transmitted. It is well known in the art of packet communications to include a synch pulse in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal. This is evidenced by King (col. 2 lines 10-34). It would have been obvious to one of ordinary skill in the art of packet

communications to include a synch pulse which defines a transmission rate for the communications packet to ensure that the receiver will properly sample the incoming signal. Waechter discloses a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5 lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated. It is also generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of critically in a particular recited value. The burden of showing criticality on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The length of the source and destination address is not deemed essential to the operation of the disclosed interface bus, and so it would be obvious to have the address be any length including a byte.

83. Regarding claim 65, referring to claim 64, Duncan in view of Lincoln in further view of King in further view of Waechter discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Lincoln: col. 5 lines 14-18).

84. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan et al (USPN 5,825,873) in view of Lincoln et al (USPN 6,108,614) as applied to claim 66 above, and

further in view of Lincoln et al (USPN 6,108,614) in further view of Wandel (USPN 6,034,623) in further view of Kou (USPN 6,085,265) in further view of Humpleman (USPN 5,940,387) in further view of Andrews et al (USPN 5,848,143) in further view of Houck et al (USPN 5,488,693) in further view of Tanaka et al (USPN 5,003,536) in further view of Stirk et al (USPN 5,642,101).

85. Regarding claim 67, referring to claim 66, Duncan in view of Lincoln possibly does not disclose having at least one command selected from the group consisting of: a command for simulating operations as if a button, a switch, or a dial on the accessory had been activated; a command for simulating operations as if a button, a switch, or a dial on the adapter had been activated; a command for resetting an accessory; a command for determining the status of an accessory; a command for reading from or writing to a memory structure within an accessory; a command for determining the identity of each accessory; and a command for requesting a firmware version number from the accessory. However it is well known in the art of communications to have a command for simulating operations as if a button, a switch, or a dial on the accessory had been activated, as is evidenced by Humpleman (Fig. 8 and col. 7 lines 1-13); a command for simulating operations as if a button, a switch, or a dial on the adapter had been activated, as is evidenced by Andrews (col. 8 lines 40-50) in order to allow the controller to be used even if a user is not in physical contact with the controller; a command for resetting an accessory, as is evidenced by Houck (col. 6 lines 5-22) in order to allow a device that is no longer operating correctly to be reset; a command for determining the status of an accessory, as is evidenced by Wandel (col. 10 lines 40-44) in order to allow a controller to properly communicate with each device; a command for reading from or writing to a memory structure

within an accessory, as is evidenced by Tanaka (col. 4 lines 1-29) in order to allow the accessory to store information relating to future communications with the controller; a command for determining the identity and version of each accessory, as is evidenced by Kou (col. 2 lines 45-57) so the controller can properly communicate with each device; and a command for requesting a firmware version number from the accessory, as is evidenced by Stirk (Fig. 3L11 blocks 9 and 10) in order to obtain the version so updated versions can be applied if applicable where requesting a version of software and equivalent to requesting a version of firmware.

Allowable Subject Matter

86. Claims 6, 19, 74, and 79 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. It is well known in the prior art to determine the bit period which is then used to determine the transmission rate. However, it is not known in the prior art to find the duration between the rising edge and falling edge in a bit period and using the value of the duration to then determine the bit period.

87. Claims 13, 25, 32, 50, and 54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. It is well known in the prior art to synchronize a signal based upon a transition (rising or falling edge), for example Manchester signaling often uses this technique. In these "self-clocking" signals one transition is used per bit period for the purposes of synchronization. While it is known to use one transition in each bit period, it is not known to use two transitions (both a rising and falling edge) in each bit period for the purposes of synchronization.

88. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

89. Claims 57-62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding claim 57, in view of the specification, the prior art did not support having the controller have a set of common commands, which can be used for commanding any one of the accessories, and accessory specific commands, which can be used for commanding only a specific type of accessory. Instead, typically there was a set of commands that was specifically addressed to a type of accessory.

Conclusion

90. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gilbert (USPN 5,530,896) see col. 1 lines 24-col. 2 line 50. Ashkin et al (USPN 4,918,598) see col. 2 lines 35-68. Stirk et al (USPN 5,642,101) see Fig. 3L and col. 4 lines 39-50, col. 5 lines 30-41, col. 5 line 64-col. 6 line 13, col. 8 lines 41-47, col. 9 lines 42-50, col. 21 lines 47-50, col. 29 lines 4-8. Ramfelt (USPN 5,838,687) see col. 1 line 64-col. 2 line 6 which discloses it is well known to use shared medium (i.e. a bus) packet communication because such communication is simple, flexible, and robust (see claims 1-3, 15, 16, 26, 33, 51, 66, 68, 70, 71, 75, and 76). Woodward (USPN 4,998,264) see col. 1 lines 14-38 which discloses that it is well known in the art of communications to use transitions (rising or falling edge) within a bit period to synchronize a signal after each bit period (see claim 39). Camhi et al (USPN 5,430,432) see col. 5 lines 45-58 which discloses that micro-controllers are well known in the art of

communications as being a cheap, accurate, and reliable way to implement designs (see claims 14, 15, 70, and 75).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-6743 for regular communications and (703)308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Daniel J. Ryman
Examiner
Art Unit 2665

DJR

Daniel J. Ryman
October 18, 2002

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